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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,114	09/20/2001	Donald V. Perino	RB1-035USC3	4507

29150 7590 06/17/2002
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EXAMINER


FIGUEROA, FELIX O

ART UNIT PAPER NUMBER

2833

DATE MAILED: 06/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/961,114	PERINO ET AL. 	
	Examiner	Art Unit	
	Felix O. Figueroa	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 68-90 is/are pending in the application.
- 4a) Of the above claim(s) 89 and 90 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 68-88 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 68-88 in Paper No. 6 is acknowledged.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, packaging material having the combination of a clip and a cam follower, as required by claim 84, must be shown or the features canceled from the claim. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 68 is objected to because of the following informalities: in claim 68 line 4, "a second side" should be --the second side--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 68-88 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 68 and 69 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the first, second and third sides.

Regarding claim, 70, it is unclear how the flexible insert can be located between the lead and the first side of the packaging material, if the lead extends from the first side of the packaging material. It is noted that in order for this to be possible the lead requires a C-shaped configuration.

In claim 80, "the metallic material" lacks antecedent basis. It appears that claim 80 should depend on claim 79 (instead of 78) in order to provide proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application

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published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 68-70, 74-79, 84-85 and 87-88 are rejected under 35 U.S.C. 102(e) as being anticipated by Perino et al. (US 6,002,589).

Perino discloses a chip package comprising a packaging material (110) having a first side and a second side; a lead (130) extending from the first side; and a first clip portion (top of 160) extending from a second side. Perino also discloses a second clip portion extending from a third side. Perino shows a flexible insert (120) residing between the lead and the first side. Perino also shows the lead having a substantially C-shape.

Perino teaches the lead being compressible. Perino also teaches the use of a support pin (920) extending from the packaging material. Perino further discloses the first and second clips being integral with the packaging material. Perino further shows the lead being a flexible metallic material.

Perino also disclose the chip package having a cam follower (bottom of 160) extending from the packaging material. Perino also shows the chip package having an integrated circuit (140) disposed in the packaging material.

Perino also teaches the packaging material having a bottom-facing housing that extends laterally from the packaging material, the bottom-facing housing having a pocket in which an end of the lead is disposed.

Claims 68 and 69 are rejected under 35 U.S.C. 102(e) as being anticipated by Yin (US 5,889,656).

Yin discloses a chip package comprising a packaging material (12) having a first side and a second side (12A); a lead (12c) extending from the first side; and a first clip portion extending from the second side. Yin also discloses a second clip extending from a third side (12B) of the packaging material.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 71, 80-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perino et al.

Regarding claim 71, Perino discloses substantially the claimed invention except for shape of the insert. However, it would have been an obvious matter of design choice to make the insert cylindrical, since applicant has not disclosed that such shape solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the insert of Perino.

Regarding claim 80, Perino discloses substantially the claimed invention except for the specific material of lead. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use beryllium-cooper as the preferred material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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Regarding claims 81-83, Perino discloses substantially the claimed invention except for the material of the packaging material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a flexible material, e.g. silicon rubber, as the preferred material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 86, Perino discloses substantially the claimed invention except for the flexible material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a flexible material as the preferred material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 70-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yin in view of Cutchaw (US 4,293,175).

Yin discloses substantially the claimed invention except for the insert residing between the lead and the first side of the packaging material. Cutchaw teaches the use of a flexible insert (82) between the leads (80) and the first side of the packaging material to align the lead, provide stability and augment the pressurized electrical connection. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to a flexible insert between the leads and the first

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side of the packaging material, as taught by Cutchaw, to align the lead, provide stability and augment the pressurized electrical connection.

Regarding claim 71, Yin, as modified by Cutchaw, discloses substantially the claimed invention except for shape of the insert. However, it would have been an obvious matter of design choice to make the insert cylindrical, since applicant has not disclosed that such shape solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the insert of Cutchaw.

Cutchaw also discloses the flexible insert being a compliant material, i.e. an elastomer; and the lead having a substantially C-shape and being compressible.

Regarding claim 77, Cutchaw discloses the use of support pin (102) to provide alignment with the mating member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the packaging material with a support pin, as taught by Cutchaw, to provide alignment with the mating member.

Regarding claim 80, Yin, as modified by Cutchaw, discloses substantially the claimed invention except for the specific material of lead. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use beryllium copper as the preferred material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 81-83, Yin, as modified by Cutchaw, discloses substantially the claimed invention except for the material of the packaging material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use

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a flexible material, e.g. silicon rubber, as the preferred material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Estes (US 5,214,563) teaches the use of C-shaped leads (120) to provide a resilient contact with the mating member. Liu et al. (US 6,176,727), Richards, III et al. (US 6,056,579) and Tsai (US 6,220,867) teach chip packages with clip portions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (703) 308-0097. The examiner can normally be reached on Mon.-Fri., 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

ffr
June 12, 2002


Hien Vu
Primary Examiner